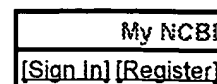
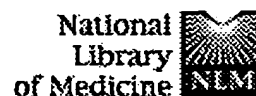


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	<i>DB=PGPB,USPT,EPAB,JPAB,DWPI; PLUR=YES; OP=OR</i>		
<input type="checkbox"/>	L13	L11 and L12	81
<input type="checkbox"/>	L12	L10 and l4	113
<input type="checkbox"/>	L11	L10 and l1	180
<input type="checkbox"/>	L10	(hbsag or surface adj antigen or surface-antigen) same (chimer\$ or fused or fusion or insert\$) with (size or length or long\$2 or bases or residues or amino adj acids)	400
<input type="checkbox"/>	L9	l2 and (HCV or Hepatitis adj C) with (envelope or E2) not l8	17
<input type="checkbox"/>	L8	L7 and l4	22
<input type="checkbox"/>	L7	(hbsag or surface adj antigen or surface-antigen) same (chimer\$ or fused or fusion or conjug\$) same (HCV or Hepatitis adj C) with (envelope or E2)	112
<input type="checkbox"/>	L6	(hbsag or surface adj antigen or surface-antigen) same (HCV or Hepatitis adj C) with (envelope or E2)	162
<input type="checkbox"/>	L5	L4 and L2	64
<input type="checkbox"/>	L4	(HBV or hepatitis adj B) same (hbsag or surface adj antigen or surface-antigen) with (carr\$ or deliver\$ or present\$ or hybrid)	773
<input type="checkbox"/>	L3	(HBV or hepatitis adj B) same (hbsag or surface adj antigen or surface-antigen) same (carr\$ or deliver\$ or present\$ or hybrid)	1470
<input type="checkbox"/>	L2	L1 and (hbsag or surface adj antigen or surface-antigen) same ((amino or "N-" or "n") near3 termin\$ or amino-term\$ or N-term\$)	120
<input type="checkbox"/>	L1	(HBV or hepatitis adj B) same (hbsag or surface adj antigen or surface-antigen) and (hbsag or surface adj antigen or surface-antigen) with (chim\$4 or fusion or fused)	793

END OF SEARCH HISTORY



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Protein

Genome

Structure

OMIM

PMC

Journals

Books

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for #23 AND #24

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<u>#25</u>	Search #23 AND #24 Field: Title/Abstract, Limits: Publication Date to 2000	15:27:05	<u>35</u>
<u>#24</u>	Related Articles for PubMed (Select 9600309)	15:22:23	<u>1430</u>
<u>#23</u>	Related Articles for PubMed (Select 8538688)	15:22:15	<u>432</u>
<u>#21</u>	Search (Hbsag or ((Hbv or "hepatitis B") AND ("surface antigen" or surface-antigen)) AND (chimer* or fusion) AND (carr* or deliver*) Field: Title/Abstract, Limits: Publication Date to 2000	15:19:45	<u>35</u>
<u>#16</u>	Search (Hbsag or ((Hbv or "hepatitis B") AND ("surface antigen" or surface-antigen)) AND (chimer* or fusion) AND (N-termin* or amino-termin* or "amino terminus") Field: Title/Abstract, Limits: Publication Date to 2000	15:18:34	<u>22</u>
<u>#12</u>	Search ("hepatitis c" or HCV) AND (E2 AND (384-661 or 661) or E2661) Field: Title/Abstract, Limits: Publication Date to 2000	14:23:39	<u>6</u>
<u>#9</u>	Search (virus-like[ab] or "virus like"[ab] or VLP[ab]) AND (hbsag or "surface antigen" or surface-antigen) AND (chimer* or fusion) Field: Title/Abstract, Limits: Publication Date to 2000	13:46:48	<u>3</u>
<u>#8</u>	Search (virus-like[ab] or "virus like"[ab] or VLP[ab]) AND (hbsag or "surface antigen" or surface-antigen) Field: Title/Abstract, Limits: Publication Date to 2000	13:46:31	<u>42</u>
<u>#7</u>	Search (virus-like[ti] or "virus like"[ti] or VLP[ti]) AND (hbsag or "surface antigen" or surface-antigen) Field: Title/Abstract, Limits: Publication Date to 2000	13:45:50	<u>12</u>
<u>#6</u>	Search (virus-like or "virus like" or VLP)[ab] AND (hbsag or "surface antigen" or surface-antigen) Field: Title/Abstract, Limits: Publication Date to 2000	13:45:29	<u>0</u>
<u>#5</u>	Search (virus-like or "virus like" or VLP)[ti] AND (hbsag or "surface antigen" or surface-antigen) Field: Title/Abstract, Limits: Publication Date to 2000	13:45:25	<u>1</u>
<u>#4</u>	Search (virus-like or "virus like" or VLP)[ti] AND (hbsag OR ((Hepatitis or HBV) AND ("surface antigen" or surface-	13:44:29	<u>5928</u>

antigen)) Field: Title/Abstract, Limits: Publication Date to 2000

- #3** Search (virus-like or "virus like" or VLP)[ti] AND (hbsag OR ((Hepatitis or HBV) AND ("surface antigen" or surface-antigen)) Field: All Fields, Limits: Publication Date to 2000 13:44:20 14899
- #2** Search (virus-like or "virus like" or VLP)[ti] AND (hbsag OR ((Hepatitis or HBV) AND ("surface antigen" or surface-antigen)) 13:44:07 17887
- #1** Search (virus-like or "virus like" or VLP) AND (hbsag OR ((Hepatitis or HBV) AND ("surface antigen" or surface-antigen)) 13:43:36 17898

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Apr 18 2005 07:10:12



results of BLAST

BLASTN 2.2.10 [Oct-19-2004]

Reference:

Altschul, Stephen F., Thomas L. Madden, Alejandro A. Schäffer, Jinghui Zhang, Zheng Zhang, Webb Miller, and David J. Lipman (1997), "Gapped BLAST and PSI-BLAST: a new generation of protein database search programs", Nucleic Acids Res. 25:3389-3402.

RID: 1115069536-22664-81151144212.BLASTQ4

Query=

(909 letters)

B2sc3 1992-2900 SEQ ID NO: 6

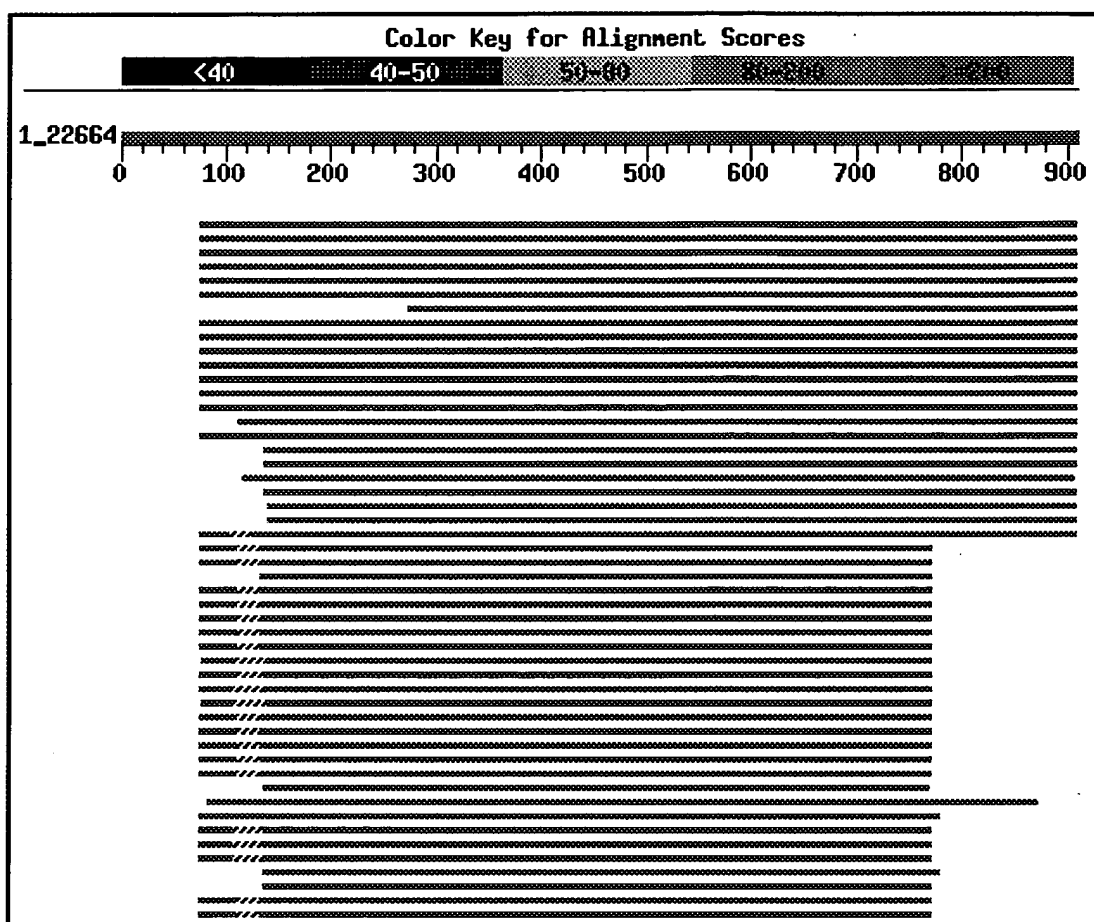
Database: All GenBank+EMBL+DDBJ+PDB sequences (but no EST, STS, GSS, environmental samples or phase 0, 1 or 2 HTGS sequences)
3,090,118 sequences; 13,912,973,737 total letters

If you have any problems or questions with the results of this search please refer to the [BLAST FAQs](#)

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Distribution of 128 Blast Hits on the Query Sequence

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Sequences producing significant alignments:			Score (bits)	E Value
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gi 14532250 qb AF387808.1 AF387808	Synthetic construct HCV ...	1637	0.0	
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gi 329875 qb M32084.1 HPCPOLYP	Hepatitis C virus polyprotei...	1251	0.0	
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gi 2327072 qb AF011752.1 AF011752	Hepatitis C virus strain ...	1178	0.0	
gi 9930556 qb AF290978.1 AF290978	Hepatitis C virus isolate...	1178	0.0	
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gi 329974 qb M62382.1 HPCST90	Hepatitis C virus structural ...	1146	0.0	
gi 30141840 emb AJ557444.1 HEC557444	Hepatitis C virus type...	1112	0.0	
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gi 13605332 qb AF348704.1 AF348704	Hepatitis C virus Q1a po...	1033	0.0	
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<u>qi 21396926 qb AF511799.1 </u>	Hepatitis C virus isolate XF73 p...	<u>924</u>	0.0
<u>qi 21396921 qb AF511794.1 </u>	Hepatitis C virus isolate XF68 p...	<u>924</u>	0.0
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<u>gi 53802171 qb AY746896.1 </u>	Hepatitis C virus clone #25-12 p...	<u>892</u>	0.0

Alignments

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Length = 9401

Score = 1645 bits (830), Expect = 0.0
Identities = 833/834 (99%)
Strand = Plus / Plus

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Query: 256  caccacaagttcaactcttcaggctgtcctgagaggctagccagctgccgaccccttacc 315
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Sbjct: 2091 gattgcttccgcaagcatccggacgccacatactctcggtgcggctccggtccctggatc 2150

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Sbjct: 2151 acaccaggtgcctggtcgactaccggtataggctttggcattatccttgtagcatcaac 2210

Query: 796 tacaccatattttaaatacaggatgtacgtgggaggggtcgaacacaggctggaagctgcc 855
|||||
Sbjct: 2211 tacaccatattttaaatacaggatgtacgtgggaggggtcgaacacaggctggaagctgcc 2270

Query: 856 tgcaactggacgcggggcgaaacgttgcgatctggaagataggacaggtccgag 909
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Sbjct: 2271 tgcaactggacgcggggcgaaacgttgcgatctggaagacaggacaggtccgag 2324

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☐ >gi|14532250|gb|AF387808.1|AF387808 Synthetic construct HCV type 1a/1b chimera mutant
complete cds
Length = 9609

Score = 1637 bits (826), Expect = 0.0
Identities = 832/834 (99%)
Strand = Plus / Plus

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Query: 136 gcaccaggcgccaagcagaacgtccagctgatcaacaccaacggcagttggcacctcaat 195

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Sbjct: 1551 |||||gcaccaggcgccaagcagaacgtccagctgatcaacaccaacggcagttggcacctcaat 1610

Query: 196 agcacggccctgaactgcaatgatagcctcaacaccggctggttggcagggcttttctat 255
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Sbjct: 1611 agcacggccctgaactgcaatgatagcctcaacaccggctggttggcagggcttttctat 1670

Query: 256 caccacaagttcaactcttcaggctgtcctgagaggctagccagctgccgacccttacc 315
 |||||

Sbjct: 1671 caccacaagttcaactcttcaggctgtcctgagaggctagccagctgccgacccttacc 1730

Query: 316 gatthttgaccagggctggggccctatcagttatgccaacggaagcggccccgaccagcgc 375
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Sbjct: 1731 gatthttgaccagggctggggccctatcagttatgccaacggaagcggccccgaccagcgc 1790

Query: 376 ccctactgctggcactaccccccaaaccttgcggtattgtgcccgcgaagagtgtgtgt 435
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Sbjct: 1791 ccctactgctggcactaccccccaaaccttgcggtattgtgcccgcgaagagtgtgtgt 1850

Query: 436 ggtccggtatattgcttcactcccagccccgtggtggtgggaacgaccgacaggtcgggc 495
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Sbjct: 1851 ggtccggtatattgcttcactcccagccccgtggtggtgggaacgaccgacaggtcgggc 1910

Query: 496 gcgcccacctacagctggggtgaaaatgatacggacgtcttcgtccttaacaataaccagg 555
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Sbjct: 1911 gcgcccacctacagctggggtgaaaatgatacggacgtcttcgtccttaacaataaccagg 1970

Query: 556 ccaccgctgggcaattggttcggttgacctggatgaactcaactggattcaccaaagt 615
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Sbjct: 1971 ccaccgctgggcaattggttcggttgacctggatgaactcaactggattcaccaaagt 2030

Query: 616 tgcggagcgcctccttgtgtcatcggagggcgggcaacaacaccctgcactgccccact 675
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Sbjct: 2031 tgcggagcgcctccttgtgtcatcggagggcgggcaacaacaccctgcactgccccact 2090

Query: 676 gattgcttccgcaagcatccggacgccacatactctcggtgcggctccggtccctggatc 735
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Sbjct: 2091 gattgcttccgcaagcatccggacgccacatactctcggtgcggctccggtccctggatc 2150

Query: 736 acaccaggtgcctggctcgactaccggtataggctttggcattatccttgtaccatcaac 795
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Sbjct: 2151 acaccaggtgcctggctcgactaccggtataggctttggcattatccttgtaccatcaac 2210

Query: 796 tacaccatattttaaatacaggatgtacgtgggaggggtcgaacacaggctggaagctgcc 855
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Sbjct: 2211 tacactatattttaaatacaggatgtacgtgggaggggtcgaacacaggctggaagctgcc 2270

Query: 856 tgcaactggacgcggggcgaaacgttgcgatctggaagataggacaggtccgag 909

|||||
Sbjct: 2271 tgcaactggacgcggggcgaacgttgcgatctggaagataggacaggtccgag 2324

>gi|14532248|gb|AF387807.1|AF387807 Synthetic construct HCV type 1a/1b chimera polypr
cds
Length = 9693

Score = 1637 bits (826), Expect = 0.0
Identities = 832/834 (99%)
Strand = Plus / Plus

Query: 76 gaaacccacgtcaccgggggaagtgccggccacactgtgtctggatttgtagcctcctc 135
|||||
Sbjct: 1491 gaaacccacgtcaccgggggaagtgccggccacactgtgtctggatttgtagcctcctc 1550

Query: 136 gcaccaggcgccaagcagaacgtccagctgatcaaccaacggcagttggcacctcaat 195
|||||
Sbjct: 1551 gcaccaggcgccaagcagaacgtccagctgatcaaccaacggcagttggcacctcaat 1610

Query: 196 agcacggccctgaactgcaatgatagcctcaacaccggctggttggcagggcttttctat 255
|||||
Sbjct: 1611 agcacggccctgaactgcaatgatagcctcaacaccggctggttggcagggcttttctat 1670

Query: 256 caccacaagttcaactcttcaggctgtcctgagaggctagccagctgccgaccccttacc 315
|||||
Sbjct: 1671 caccacaagttcaactcttcaggctgtcctgagaggctagccagctgccgaccccttacc 1730

Query: 316 gattttgaccagggtgtggggccctatcagttatgccaacggaagcggccccgaccagcgc 375
|||||
Sbjct: 1731 gattttgaccagggtgtggggccctatcagttatgccaacggaagcggccccgaccagcgc 1790

Query: 376 ccctactgctggcactaccccccaaaccttgcggtattgtgcccgcaagagtgtgtgt 435
|||||
Sbjct: 1791 ccctactgctggcactaccccccaaaccttgcggtattgtgcccgcaagagtgtgtgt 1850

Query: 436 ggtccggtatattgcttcactcccagccccgtggtggtgggaacgaccgacaggtcgggc 495
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Sbjct: 1851 ggtccggtatattgcttcactcccagccccgtggtggtgggaacgaccgacaggtcgggc 1910

Query: 496 gcgcccacctacagctggggtgaaaatgatacggacgtcttcgtccttaacaataaccagg 555
|||||
Sbjct: 1911 gcgcccacctacagctggggtgaaaatgatacggacgtcttcgtccttaacaataaccagg 1970

Query: 556 ccaccgctgggcaattgggttcggtgtacctggatgaactcaactggattcaccaaagtg 615
|||||
Sbjct: 1971 ccaccgctgggcaattgggttcggtgtacctggatgaactcaactggattcaccaaagtg 2030

Query: 616 tgcggagcgcctccttgtgtcatcggagggggcgggcaacaacaccctgcactgccccact 675

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Sbjct: 2031 tgcggagcgcctccttgtgtcatcggagggcggggaacaacaccctgcactgccccact 2090

Query: 676 gattgcttccgcaagcatccggacgccacatactctcgggtcgggctccgggtccctggatc 735
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Sbjct: 2091 gattgcttccgcaagcatccggacgccacatactctcgggtcgggctccgggtccctggatc 2150

Query: 736 acacccagggtgcctgggtcgactacccgtataggctttggcattatccttgtaccatcaac 795
|||||

Sbjct: 2151 acacccagggtgcctgggtcgactacccgtataggctttggcattatccttgtaccatcaac 2210

Query: 796 tacaccatattttaaatacaggatgtacgtgggaggggtcgaacacaggctggaagctgcc 855
|||||

Sbjct: 2211 tacactatattttaaatacaggatgtacgtgggaggggtcgagcacaggctggaagctgcc 2270

Query: 856 tgcaactggacgcggggcgaaacgttgcatctggaagataggacagggtccgag 909
|||||

Sbjct: 2271 tgcaactggacgcggggcgaaacgttgcatctggaagataggacagggtccgag 2324

>gi|14532246|gb|AF387806.1|AF387806 Synthetic construct HCV type 1a polyprotein mRNA,
Length = 9646

Score = 1637 bits (826), Expect = 0.0

Identities = 832/834 (99%)

Strand = Plus / Plus

Query: 76 gaaacccacgtcaccgggggaagtgccggccacactgtgtctggatttgtagcctcctc 135
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Sbjct: 1491 gaaacccacgtcaccgggggaagtgccggccacactgtgtctggatttgtagcctcctc 1550

Query: 136 gcaccaggcgccaagcagaacgtccagctgatcaacaccaacggcagttggcacctcaat 195
|||||

Sbjct: 1551 gcaccaggcgccaagcagaacgtccagctgatcaacaccaacggcagttggcacctcaat 1610

Query: 196 agcacggccctgaactgcaatgatagcctcaacaccggctggttggcagggcttttctat 255
|||||

Sbjct: 1611 agcacggccctgaactgcaatgatagcctcaacaccggctggttggcagggcttttctat 1670

Query: 256 caccacaagttcaactcttcaggctgtcctgagaggctagccagctgccgaccccttacc 315
|||||

Sbjct: 1671 caccacaagttcaactcttcaggctgtcctgagaggctagccagctgccgaccccttacc 1730

Query: 316 gatTTtgaccagggtgTggggccctatcagttatgccaacggaagcggtcccgaccagcg 375
|||||

Sbjct: 1731 gatTTtgaccagggtgTggggccctatcagttatgccaacggaagcggtcccgaccagcg 1790

Query: 376 ccctactgctggcactacccccaaaaccttgcggtattgtgcccgcgaagagtgtgtgt 435
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Sbjct: 1791 ccctactgctggcactaccccccaaaccttgcggtattgtgcccgcgaagagtgtgtgt 1850

Query: 436 ggtccggtatattgcttcactcccagccccgtggtggtggaacgaccgacaggtcgggc 495

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Query: 496 gcgcccacctacagctggggtgaaaatgatacgacgtcttcgtccttaacaataaccagg 555

|||||

Sbjct: 1911 gcgcccacctacagctggggtgaaaatgatacgacgtcttcgtccttaacaataaccagg 1970

Query: 556 ccaccgctgggcaattggttcggtgtacctggatgaactcaactggattcaccaaagt 615

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Sbjct: 2151 acaccaggtgcctggtcgactaccggtataggctttggcattatccttgtaccatcaac 2210

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
|||||

Sbjct: 2211 tacactatattttaaatacaggatgtacgtgggaggggtcgagcacaggctggaagctgcc 2270

Query: 856 tgcaactggacgcggggcgaaacgttgcgatctggaagataggacaggtccgag 909

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Sbjct: 2271 tgcaactggacgcggggcgaaacgttgcgatctggaagataggacaggtccgag 2324

 >gi|14532244|gb|AF387805.1|AF387805 Synthetic construct HCV type 1a/1b chimera polypr
cds
Length = 9609

Score = 1637 bits (826), Expect = 0.0

Identities = 832/834 (99%)

Strand = Plus / Plus

Query: 76 gaaacccacgtcaccgggggaagtgccggccacactgtgtctggatttgtagcctcctc 135

|||||

Sbjct: 1491 gaaacccacgtcaccgggggaagtgccggccacactgtgtctggatttgtagcctcctc 1550

Query: 136 gcaccaggcgccaagcagaacgtccagctgatcaacaccaacggcagttggcacctcaat 195

|||||

Sbjct: 1551 gcaccaggcgccaagcagaacgtccagctgatcaacaccaacggcagttggcacctcaat 1610

Query: 196 agcacggccctgaactgcaatgatagcctcaacaccggctggttggcagggcttttctat 255
 |||

Sbjct: 1611 agcacggccctgaactgcaatgatagcctcaacaccggctggttggcagggcttttctat 1670

Query: 256 caccacaagttcaactcttcaggctgtcctgagaggctagccagctgccgaccccttacc 315
 |||

Sbjct: 1671 caccacaagttcaactcttcaggctgtcctgagaggctagccagctgccgaccccttacc 1730

Query: 316 gattttgaccagggctggggccctatcagttatgccaacggaagcggcccccaccagcgc 375
 |||

Sbjct: 1731 gattttgaccagggctggggccctatcagttatgccaacggaagcggcccccaccagcgc 1790

Query: 376 ccctactgctggcactacccccaaaaaccttgcggtattgtgcccgcgaagagtgtgtgt 435
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Sbjct: 1791 ccctactgctggcactacccccaaaaaccttgcggtattgtgcccgcgaagagtgtgtgt 1850

Query: 436 ggtccggtatattgcttcactcccagccccgtggtggtgggaacgaccgacaggtcgggc 495
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Sbjct: 1851 ggtccggtatattgcttcactcccagccccgtggtggtgggaacgaccgacaggtcgggc 1910

Query: 496 gcgcccacctacagctggggtgaaaatgatacgagcgtcttcgtccttaacaataaccagg 555
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Sbjct: 1911 gcgcccacctacagctggggtgaaaatgatacgagcgtcttcgtccttaacaataaccagg 1970

Query: 556 ccaccgctgggcaattgggttcggttgtagctggaactcaactggattcaccaaagtg 615
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Sbjct: 1971 ccaccgctgggcaattgggttcggttgtagctggaactcaactggattcaccaaagtg 2030

Query: 616 tgcgagcgcctccttggtgtcatcgaggggcgggcaacaacaccctgcactgccccact 675
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Sbjct: 2031 tgcgagcgcctccttggtgtcatcgaggggcgggcaacaacaccctgcactgccccact 2090

Query: 676 gattgcttccgcaagcatccggacgccacatactctcggtgcggctccggtccctggatc 735
 |||

Sbjct: 2091 gattgcttccgcaagcatccggacgccacatactctcggtgcggctccggtccctggatc 2150

Query: 736 acaccaggtgcctggctgactaccggtataggctttggcattatccttgtagcatcaac 795
 |||

Sbjct: 2151 acaccaggtgcctggctgactaccggtataggctttggcattatccttgtagcatcaac 2210

Query: 796 tacaccatattttaaatacaggatgtacgtgggaggggtcgaacacaggctggaagctgcc 855
 |||

Sbjct: 2211 tacactatattttaaatacaggatgtacgtgggaggggtcgagcacaggctggaagctgcc 2270

Query: 856 tgcaactggacgcggggcgaaacgttgcgatctggaagataggacaggtccgag 909
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Sbjct: 2271 tgcaactggacgcggggcggaacgttgcgatctggaagatagggacaggtccgag 2324

>gi|8926244|gb|AF271632.1|AF271632 Hepatitis C virus polyprotein gene, complete cds
Length = 9618

Score = 1566 bits (790), Expect = 0.0
Identities = 823/834 (98%)
Strand = Plus / Plus

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Query: 76   gaaacccacgtcaccgggggaagtgccggccacactgtgtctggatttgtagcctctc 135
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Sbjct: 1491 gaaacccacgtcaccgggggaagtgccggccacactgtgtctggatctgtagcttctc 1550

Query: 136  gcaccaggcgccaagcagaacgtccagctgatcaacaccaacggcagttggcacctcaat 195
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Sbjct: 1551 gcaccaggcgccaagcagaatgtccagctgatcaacaccaacggcagttggcacctcaat 1610

Query: 196  agcacggccctgaactgcaatgatagcctcaacaccggctggttggcagggcttttctat 255
          |||
Sbjct: 1611 agcacggccctgaactgcaatgatagccttaacaccggctggttggcagggcttttctat 1670

Query: 256  caccacaagttcaactcttcaggctgtcctgagaggctagccagctgccgacccttacc 315
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Sbjct: 1671 caccacaagttcaactcttcaggctgtcctgagaggctagccagctgccgacccttacc 1730

Query: 316  gatTTTgaccagggtgTgggcccTatcagttatgccaaCggaagcgggcccccGaccagcgc 375
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Sbjct: 1731 gatTTTgaccagggtgTgggcccTatcagttatgccaaCggaagcgggcccccGaccagcgc 1790

Query: 376  ccctactgctggcactacccccaaaaccttgcggtattgtgcccgcgaagagtgtgtgt 435
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Sbjct: 1791 ccctactgctggcactacccccaaaaccttgcggtattgtgcccgcgaagagtgtgtgt 1850

Query: 436  ggtccggtatattgcttcaactcccagccccgtggtggtgggaacgaccgacaggtcgggc 495
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Sbjct: 1851 ggtccggtatattgcttcaactcccagccccgtggtggtgggaacgaccgacaggtcgggc 1910

Query: 496  gcgcccactacagctggggtgaaaatgatacgagcgtcttcgtccttaacaataaccagg 555
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Sbjct: 1911 gcgcctacactacagctggggtgaaaacgatacgagcgttttcgtccttaacaataaccagg 1970

Query: 556  ccaccgctgggcaattggttcggttgatgaactcaactggattcaccaaagt 615
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Sbjct: 1971 ccaccgctgggcaattggttcggttgatgaactcaactggattcaccaaagt 2030

Query: 616  tgcggagcgcctccttgtgtcatcgaggggcggggcaacaacaccctgcactgccccact 675
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Sbjct: 2031 tgcggagcgcctccttgtgtcatcgaggggcggggcaacaacaccctgcactgccccact 2090
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Query: 676 gattgcttccgcaagcatccggacgccacatactctcgggtgcggctccggtccttgatc 735
|||||
Sbjct: 2091 gattgcttccgcaagcatccggacgccacatactctcgggtgcggctccggtccttgatc 2150

Query: 736 acacccagggtgcctggctcgactacccgtataggctttggcattatccttgtaccatcaac 795
|||||
Sbjct: 2151 acacccagggtgcctggctcgattacccgtataggctttggcattatccttgtaccatcaac 2210

Query: 796 tacaccatattttaaatacaggatgtacgtgggaggggtcgaacacaggctggaagctgcc 855
|||||
Sbjct: 2211 tacaccatattttaaatacaggatgtacgtgggaggggtcgaacacaggctggaagctgcc 2270

Query: 856 tgcaactggacgcggggcgaaacgttgcgatctggaagatagggacagggtccgag 909
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Sbjct: 2271 tgcaactggacgcggggcgaaacgttgcgatctggaagatagggacagggtccgag 2324

>gi|329875|gb|M32084.1|HPCPOLYP Hepatitis C virus polyprotein gene, partial cds
Length = 7310

Score = 1251 bits (631), Expect = 0.0
Identities = 634/635 (99%)
Strand = Plus / Plus

Query: 275 caggctgtcctgagaggctagccagctgccgaccccttaccgattttgaccagggctggg 334
|||||
Sbjct: 1 caggctgtcctgagaggctagccagctgccgaccccttaccgattttgaccagggctggg 60

Query: 335 gccctatcagttatgccaacggaagcggcccccaccagcgccttactgctggcactacc 394
|||||
Sbjct: 61 gccctatcagttatgccaacggaagcggcccccaccagcgccttactgctggcactacc 120

Query: 395 ccccaaaaccttgcggtattgtgcccgcgaagagtgtgtgtggtccggtatattgcttca 454
|||||
Sbjct: 121 ccccaaaaccttgcggtattgtgcccgcgaagagtgtgtgtggtccggtatattgcttca 180

Query: 455 ctcccagccccgtggtggtgggaacgaccgacaggctcgggcgcgcccacctacagctggg 514
|||||
Sbjct: 181 ctcccagccccgtggtggtgggaacgaccgacaggctcgggcgcgcccacctacagctggg 240

Query: 515 gtgaaaatgatacggacgtcttcgtccttaacaataaccaggccaccgctgggcaattggt 574
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Sbjct: 241 gtgaaaatgatacggacgtcttcgtccttaacaataaccaggccaccgctgggcaattggt 300

Query: 575 tcggttgtagctggatgaactcaactggattcaccaaagtgtgaggagcgccctccttggt 634
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Sbjct: 301 tcggttgtagctggatgaactcaactggattcaccaaagtgtgaggagcgccctccttggt 360


Query: 635 tcatcggaggggcgggcaacaacaccctgcactgccccactgattgcttccgcaagcatc 694
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Sbjct: 361 tcatcggaggggcgggcaacaacaccctgcactgccccactgattgcttccgcaagcatc 420

Query: 695 cggacgccacatactctcgggtgcgggtccggtccctggatcacacccagggtgcctgggtcg 754
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Sbjct: 421 cggacgccacatactctcgggtgcgggtccggtccctggatcacacccagggtgcctgggtcg 480

Query: 755 actaccggtataggctttggcattatccttgtaccatcaactacaccatattttaaataca 814
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Sbjct: 481 actaccggtataggctttggcattatccttgtaccatcaactacaccatattttaaataca 540

Query: 815 ggatgtacgtgggagggggtcgaacacaggctggaagctgcctgcaactggacgcggggcg 874
|||||
Sbjct: 541 ggatgtacgtgggagggggtcgaacacaggctggaagctgcctgcaactggacgcggggcg 600

Query: 875 aacgttgcgatctggaagataggacagggtccgag 909
|||||
Sbjct: 601 aacgttgcgatctggaagacagggtccgag 635

 >gi|329972|gb|M62381.1|HPCST77 Hepatitis C virus polyprotein gene, partial cds
Length = 2610

Score = 1217 bits (614), Expect = 0.0
Identities = 779/834 (93%)
Strand = Plus / Plus

Query: 76 gaaacccacgtcaccgggggaagtgccggccacactgtgtctggatttgtagcctcctc 135
|||||
Sbjct: 1426 gaaacccacgtcaccgggggaagtgccggccgaccacggctgggcttgttggtctcctt 1485

Query: 136 gcaccaggcgccaagcagaacgtccagctgatcaacaccaacggcagttggcacctcaat 195
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Sbjct: 1486 acaccaggcgccaagcagaacatccaactgatcaacaccaacggcagttggcacatcaat 1545

Query: 196 agcacggccttgaactgcaatgatagcctcaacaccggctggttggcagggcttttctat 255
|||||
Sbjct: 1546 agcacggccttgaactgcaatgaaagccttaacaccggctggttagcagggcttctat 1605

Query: 256 caccacaagttcaactcttcaggctgtcctgagaggctagccagctgccgaccccttacc 315
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Sbjct: 1606 caccacaaattcaactcttcaggctgtcctgagagggtggccagctgccgacgccttacc 1665

Query: 316 gatthttgaccagggtggtggggtccctatcagttatgccaaacggaagcggcccgaccagcgc 375
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Sbjct: 1666 gatthttgccagggtggtggggtccctatcagttatgccaaacggaagcggcctcgacgaacgc 1725

Query: 376 ccctactgctggcactaccccccaaaccttgcggtattgtgcccgcgaagagtgtgtgt 435
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 Sbjct: 1726 ccctactgctggcactaccctccaagaccttggtggcattgtgcccgcaaagagcgtgtgt 1785

Query: 436 ggtccggtatatattgcttcactcccagccccgtggtggtgggaacgaccgacaggtcgggc 495
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 Sbjct: 1786 ggcccgtatatattgcttcactcccagccccgtggtggtgggaacgaccgacaggtcgggc 1845

Query: 496 gcgcccacctacagctggggtgaaaatgatacggacgtcttcgtccttaacaataaccagg 555
 |||||
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Query: 556 ccaccgctgggcaattggttcggttgatgaactcaactggattcaccaaagt 615
 |||||
 Sbjct: 1906 ccaccgctgggcaattggttcggttgatgaactcaactggattcaccaaagt 1965



Query: 616 tgcggagcgccctccttggtcatcggagggcgggcaacaacaccctgactgccccact 675
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 Sbjct: 1966 tgcggagcgcccccttggtcatcggaggggtgggcaacaacaccctgctctgccccact 2025

Query: 676 gattgcttccgcaagcatccggacgccacatactctcggtgcggctccggtccctggatc 735
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 Sbjct: 2026 gattgcttccgcaagcatccgggaagccacatactctcggtgcggctccggtccctggatt 2085

Query: 736 acaccaggtgcctggctgactaccggtataggctttggcattatccttgtagcatcaac 795
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 Sbjct: 2086 acaccaggtgcatggctgactaccggtataggctttggcattatccttgtagcatcaat 2145

Query: 796 tacaccatattttaaatacaggatgtacgtgggaggggtcgaacacaggctggaagctgcc 855
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 Sbjct: 2146 tacaccatattcaaagtcaggatgtacgtgggaggggtcgaacacaggctggaagcggcc 2205

Query: 856 tgcaactggacgcggggcgaaacgttgcatctggaagataggacaggtccgag 909
 |||||
 Sbjct: 2206 tgcaactggacgcggggcgaaacgttgcatctggaagacaggacaggtccgag 2259

 >gi|2316097|gb|AF009606.1|AF009606  Hepatitis C virus polyprotein gene, complete cds
 Length = 9646

Score = 1201 bits (606), Expect = 0.0
 Identities = 777/834 (93%)
 Strand = Plus / Plus

Query: 76 gaaaccacgtcaccgggggaagtgccggccacactgtgtctggatttgtagcctcctc 135
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 Sbjct: 1491 gaaaccacgtcaccgggggaagtgccggccacacaggctgggcttggtgtctcctt 1550

Query: 136 gcaccaggcgccaagcagaacgtccagctgatcaacaccaacggcagttggcacctcaat 195

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Sbjct: 1551 acaccaggcgccaagcagaacatccaactgatcaacaccaacggcagttggcacatcaat 1610

Query: 196 agcacggccctgaactgcaatgatagcctcaacaccggctggttggcagggcttttctat 255
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Query: 256 caccacaagttcaactcttcaggctgtcctgagaggctagccagctgccgaccccttacc 315
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Query: 316 gatthttgaccagggctggggccctatcagttatgccaacggaagcggcccgaccagcgc 375
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Sbjct: 1731 gatthttgccagggctggggctcctatcagttatgccaacggaagcggcctcgacgaacgc 1790

Query: 376 ccctactgctggcactaccccccaaaccttgcggtattgtgcccgcgaagagtgtgtgt 435
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Sbjct: 1791 ccctactgctggcactaccctccaagaccttggtgcatgtgcccgcgaagagcgtgtgt 1850

Query: 436 ggtccgggtatattgcttcactcccagccccgtggtggtgggaacgaccgacaggtcgggc 495
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Query: 496 gcgcccacctacagctgggggtgaaaatgatacggacgtcttcgtccttaacaataaccagg 555
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Sbjct: 1911 gcgcctacctacagctgggggtgcaaatacgtacggatgtcttcgtccttaacaacaccagg 1970

Query: 556 ccaccgctgggcaattggttcggttgatcctggatgaactcaactggattcaccaaagt 615
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Sbjct: 1971 ccaccgctgggcaattggttcggttgatcctggatgaactcaactggattcaccaaagt 2030

Query: 616 tgcggagcgcctccttggtgtcatcggaggggagggaacaacaccctgcaactgccccact 675
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Sbjct: 2031 tgcggagcgcctccttggtgtcatcggaggggagggaacaacaccctgctctgccccact 2090

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Sbjct: 2091 gattgtttccgcaagcatccggaagccacatactctcggtgcggctccggtccctggatt 2150

Query: 736 acaccaggtgcctggctcgactacccgtataggctttggcattatccttgtagcatcaac 795
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Sbjct: 2151 acaccaggtgcatggctcgactacccgtataggctttggcactatccttgtagcatcaat 2210

Query: 796 tacaccatattttaaatacaggatgtacgtgggaggggtcgaacacaggctggaagctgcc 855
|||||
Sbjct: 2211 tacaccatattcaaagtcaggatgtacgtgggaggggtcgagcacaggctggaagcggcc 2270

Query: 856 tgcaactggacgcggggcgaaacgttgcatctggaagataggacaggtccgag 909

|||||
Sbjct: 2271 tgcaactggacgcggggcgaacgctgtgatctggaagacagggacaggtccgag 2324

>gi|2327074|gb|AF011753.1|AF011753 Hepatitis C virus strain H77 pH21 polyprotein gene,
Length = 9599

Score = 1193 bits (602), Expect = 0.0
Identities = 776/834 (93%)
Strand = Plus / Plus

Query: 76 gaaacccacgtcaccgsggggaagtgccggccacactgtgtctggatttggttagcctcctc 135
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Sbjct: 1491 gaaacccacgtcaccgsggggaagtgccggccgaccacggctgggcttggtggtcctcctt 1550

Query: 136 gcaccaggcgccaagcagaacgtccagctgatcaacaccaacggcagttggcacctcaat 195
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Sbjct: 1551 acaccaggcgccaagcagaacatccaactgatcaacaccaacggcagttggcacatcaat 1610

Query: 196 agcacggccctgaactgcaatgatagcctcaacaccggctggttggcagggcttttctat 255
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Query: 256 caccacaagttcaactcttcaggctgtcctgagaggctagccagctgccgacccttacc 315
|| |||||
Sbjct: 1671 cagcacaaattcaactcttcaggctgtcctgagagggttgaccagctgccgacgccttacc 1730

Query: 316 gatthttgaccagggtgsgggccctatcagttatgccaaacggaagcggcggcccgaccagcgc 375
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Query: 376 ccctactgctggcactaccccccaaaccttgcggtattgtgccccggaagagtgtgtgt 435
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Sbjct: 1791 ccctactgctggcactaccctccaagaccttggtggcattgtgccccgcaaagagcgtgtgt 1850

Query: 436 ggtccggtatattgcttcactcccagccccgtggtggtgggaacgaccgacaggtcgggc 495
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Query: 556 ccaccgctgggcaattggttcggttgtagctggaactcaactggattcaccaaagt 615
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Sbjct: 1971 ccaccgctgggcaattggttcggttgtagctggaactcaactggattcaccaaagt 2030

Query: 616 tgcggagcgcctccttggtgtcatcgaggsgggcgsggaacaacaccctgcactgccccact 675
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Sbjct: 2031 tgcggagcgcccccttggtgtcatcggaggggtgggcaacaacaccttgctctgccccact 2090

Query: 676 gattgcttccgcaagcatccggacgccacatactctcggtgcggtccgggtccctggatc 735
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Sbjct: 2091 gattgcttccgcaaacatccggaagccacatactctcggtgcggtccgggtccctggatt 2150

Query: 736 acacccagggtgcctggtcgactacccgtataggctttggcattatccttgtaccatcaac 795
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Sbjct: 2151 acacccagggtgcatggtcgactacccgtataggctttggcactatccttgtaccatcaat 2210

Query: 796 tacaccatattttaaatacaggatgtacgtgggaggggtcgaacacaggctggaagctgcc 855
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Sbjct: 2211 tacaccatattcaaagtcaggatgtacgtgggaggggtcgagcacaggctggaagcggcc 2270

Query: 856 tgcaactggacgcggggcgaaacgttgcatctggaagatagggacagggtccgag 909
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Sbjct: 2271 tgcaactggacgcggggcgaaacgttgcatctggaagacagggtccgag 2324

>gi|2327070|gb|AF011751.1|AF011751 Hepatitis C virus strain H77 pCV-H77C polyprotein c
Length = 9599

Score = 1185 bits (598), Expect = 0.0

Identities = 775/834 (92%)

Strand = Plus / Plus

Query: 76 gaaacccacgtcaccgggggaagtgccggccacactgtgtctggatttgttagcctcctc 135
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Sbjct: 1491 gaaacccacgtcaccgggggaagtgccggccgaccacggctgggcttgttggtctcctt 1550

Query: 136 gcaccaggcgccaagcagaacgtccagctgatcaacaccaacggcagttggcacctcaat 195
|||||

Sbjct: 1551 acaccaggcgccaagcagaacatccaactgatcaacaccaacggcagttggcacatcaat 1610

Query: 196 agcacggccctgaaactgcaatgatagcctcaacaccggctggttggcagggcttttctat 255
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Sbjct: 1611 agcacggccttgaaattgcaatgaaagccttaacaccggctggttagcagggctcttctat 1670

Query: 256 caccacaagttcaactcttcaggctgtcctgagaggctagccagctgccgacccttacc 315
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Sbjct: 1671 caacacaaattcaactcttcaggctgtcctgagagggtggccagctgccgacgccttacc 1730

Query: 316 gattttgaccagggtggtggccctatcagttatgccaacggaagcggcccgaccagcgc 375
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Sbjct: 1731 gattttgccagggtggtggccctatcagttatgccaacggaagcggcctcgacgaacgc 1790

Query: 376 ccctactgctggcactacccccaaaaaccttgcggtattgtgcccgcgaagagtgtgtgt 435
|||||

Sbjct: 1791 ccctactgctggcactaccctccaagaccttggtggcattgtgcccgcgaagagcgtgtgt 1850

Query: 436 ggtccggtatattgcttcactcccagccccgtggtggtggaacgaccgacaggtcgggc 495
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Query: 496 gcgcccacctacagctgggggtgaaaatgatacggacgtcttcgtccttaacaataaccagg 555
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Query: 556 ccaccgctgggcaattgggttcggtgtacctggatgaactcaactggattcaccaaagtgc 615
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
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Query: 676 gattgcttccgcaagcatccggacgccacatactctcgggtgcggctccggtccctggatc 735
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 Sbjct: 2091 gattgcttccgcaaacatccggaagccacatactctcgggtgcggctccggtccctggatt 2150

Query: 736 acaccaggtgcctgggtcgactaccggtataggctttggcattatccttgtaccatcaac 795
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Query: 796 tacaccatattttaaatacaggatgtacgtgggaggggtcgaaacacaggctggaagctgcc 855
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Query: 856 tgcaactggacgcggggcgaaacgttgatctggaagataggacaggtccgag 909
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 Sbjct: 2271 tgcaactggacgcggggcgaaacgttgatctggaagacaggacaggtccgag 2324

 >gi|2327072|gb|AF011752.1|AF011752 Hepatitis C virus strain H77 pCV-H11 polyprotein ge
 Length = 9599

Score = 1178 bits (594), Expect = 0.0
 Identities = 774/834 (92%)
 Strand = Plus / Plus

Query: 76 gaaaccacgtcaccgggggaagtgccggccacactgtgtctggatttgtagcctcctc 135
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Query: 136 gcaccaggcgccaagcagaacgtccagctgatcaacaccaacggcagttggcacctcaat 195
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Query: 196 agcacggccctgaactgcaatgatagcctcaacaccggctggttggcagggcttttctat 255
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 Sbjct: 1611 agcacggccttgaactgcaacgatagccttaccaccggctggttagcagggctcttctat 1670

Query: 256 caccacaagttcaactcttcaggctgtcctgagaggctagccagctgccgaccccttacc 315
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Query: 316 gatthttgaccagggctggggccctatcagttatgccaacggaagcgccccgaccagcgc 375
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 Sbjct: 1731 gatthttgccagggctggggcctatcagttatgccaacggaagcgccctcgacgaacgc 1790

Query: 376 ccctactgctggcactacccccaaaaccttgcggtattgtgcccgcgaagagtgtgtgt 435
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Query: 436 ggtccggtatattgcttcactcccagccccgtggtggtgggaacgaccgacaggtcgggc 495
 || ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
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Query: 496 gcgcccacctacagctggggtgaaaatgatacggacgtcttcgtccttaacaataaccagg 555
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 Sbjct: 1911 gcgcccacctacagctggggtgcaaatacagacggatgtcttcgtccttaacaacaccagg 1970

Query: 556 ccaccgctgggcaattggttcggtgtacctggatgaactcaactggattcaccaaagt 615
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 Sbjct: 1971 ccaccgctgggcaattggttcggtgtacctggatgaactcaactggattcaccaaagt 2030

Query: 616 tgcggagcgcctccttgtgtcatcggagggcgggcaacaacaccctgcactgccccact 675
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 Sbjct: 2031 cgcggagtgcccccttgtgtcatcggaggggtgggcaacaacaccttgctctgccccact 2090

Query: 676 gattgcttccgcaagcatccggacgccacatactctcggtgcggctccggtccctggatc 735
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 Sbjct: 2091 gattgcttccgcaaacatccggaagccacatactctcggtgcggctccggtccctggatt 2150

Query: 736 acaccaggtgcctggctgactaccggtataggctttggcattatccttgtaccatcaac 795
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 Sbjct: 2151 acaccaggtgcatggctgactaccggtataggctttggcactatccttgtaccatcaat 2210

Query: 796 tacaccatatttaaaatcaggatgtacgtgggaggggtcgaacacaggctggaagctgcc 855
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 Sbjct: 2211 tacaccatattcaaagtccaggatgtacgtgggaggggtcgagcacaggctggaagcggcc 2270

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results of BLAST

BLASTN 2.2.10 [Oct-19-2004]

Reference:

Altschul, Stephen F., Thomas L. Madden, Alejandro A. Schäffer, Jinghui Zhang, Zheng Zhang, Webb Miller, and David J. Lipman (1997), "Gapped BLAST and PSI-BLAST: a new generation of protein database search programs", Nucleic Acids Res. 25:3389-3402.

RID: 1115070643-20623-159705274690.BLASTQ2

Query=

(676 letters)

Bases 2907-3583 SEQ ID NO:6

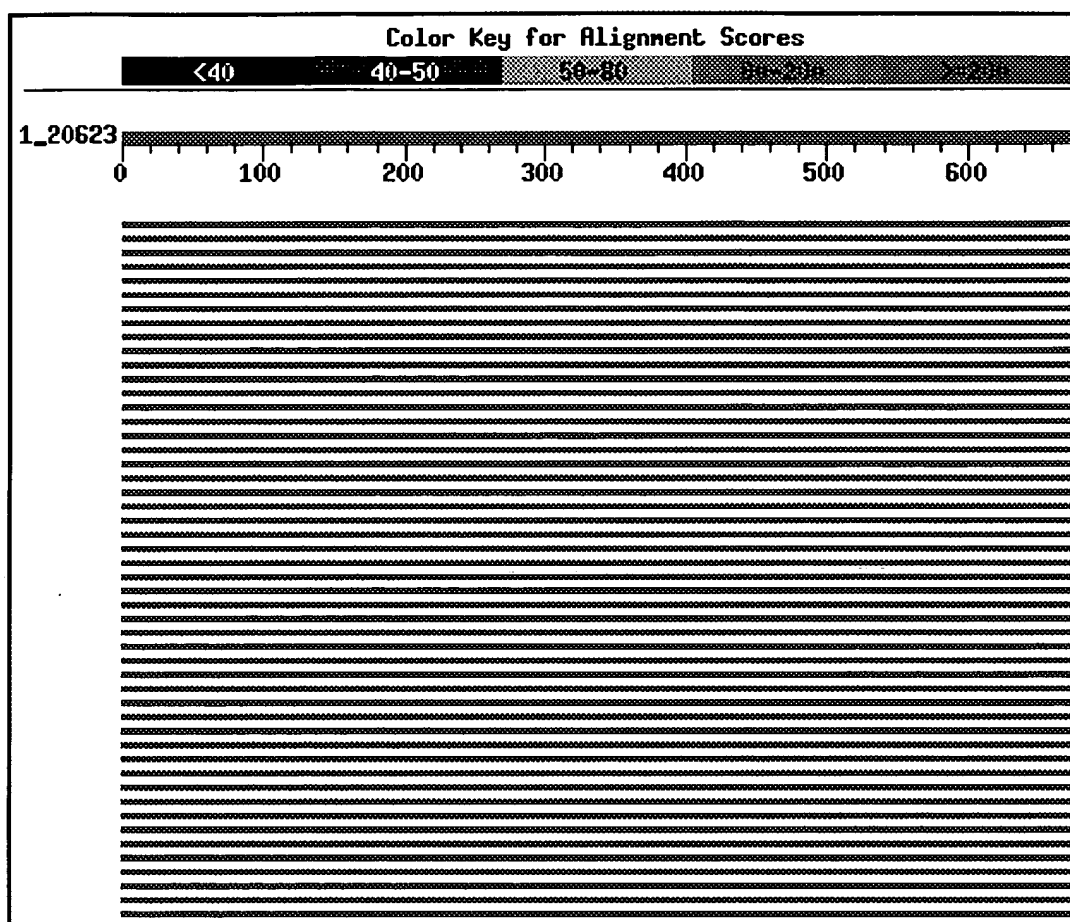
Database: All GenBank+EMBL+DDBJ+PDB sequences (but no EST, STS, GSS, environmental samples or phase 0, 1 or 2 HTGS sequences)
3,090,118 sequences; 13,912,973,737 total letters

If you have any problems or questions with the results of this search please refer to the [BLAST FAQs](#)

[Taxonomy reports](#)

Distribution of 100 Blast Hits on the Query Sequence

Mouse-over to show defline and scores. Click to show alignments



Sequences producing significant alignments:		Score (bits)	E Value
gi 59418 emb X02763.1 HBVADW2	Hepatitis b virus genome (ser...	1312	0.0
gi 22530871 qb AY128092.1 	Hepatitis B virus clone pEco63, ...	1312	0.0
gi 14285166 qb AF305422.1 AF305422	Synthetic construct Hepa...	1312	0.0
gi 329718 qb J02205.1 HPBSAG	hepatitis b virus surface anti...	1312	0.0
gi 50953648 qb AY576426.1 	Hepatitis B virus isolate 20026B...	1304	0.0
gi 14485028 qb AF363663.1 	Hepatitis B virus isolate MEX4c ...	1304	0.0
gi 41529362 dbj AB116081.1 	Hepatitis B virus DNA, complete...	1304	0.0
gi 41529358 dbj AB116080.1 	Hepatitis B virus DNA, complete...	1304	0.0
gi 41529354 dbj AB116079.1 	Hepatitis B virus DNA, complete...	1304	0.0
gi 41529350 dbj AB116078.1 	Hepatitis B virus DNA, complete...	1304	0.0
gi 62006064 dbj AP007263.1 	Hepatitis B virus gene for HBsA...	1304	0.0
gi 3892577 emb AJ012207.1 HBV012207	Hepatitis B virus ssAg,...	1304	0.0
gi 15419852 qb AF297624.1 AF297624	Hepatitis B virus isolat...	1304	0.0
gi 58189959 qb AY738822.1 	Hepatitis B virus strain Rio HBs...	1304	0.0
gi 2289173 qb U87725.1 HBU87725	Hepatitis B virus A24 middl...	1304	0.0
gi 292401 qb L13994.1 HUMPRECX	Hepatitis B virus preS and p...	1304	0.0
gi 2653706 qb U91820.1 HBU91820	Hepatitis B virus isolate 2...	1304	0.0
gi 47499923 qb AY603458.1 	Hepatitis B virus isolate 59T la...	1296	0.0
gi 47499903 qb AY603453.1 	Hepatitis B virus isolate 32T la...	1296	0.0
gi 47499879 qb AY603447.1 	Hepatitis B virus isolate 19T la...	1296	0.0
gi 527440 emb Z35717.1 HBVGEN2	Human hepatitis B virus (adw...	1296	0.0
gi 59416 emb V00866.1 HBVADW	Hepatitis B virus complete DNA...	1296	0.0
gi 14517843 qb AF369544.1 	Hepatitis B virus isolate MEX515...	1296	0.0

qi 14517819 qb AF369532.1 	Hepatitis B virus isolate MEX9c ...	1296	0.0
qi 416074 emb X75666.1 HHVBA	Human hepatitis virus (genotyp...	1296	0.0
qi 18389985 qb AF462041.1 	Hepatitis B virus clone pAM6, co...	1296	0.0
qi 38000025 qb AY344103.1 	Hepatitis B virus isolate 5-AIII...	1296	0.0
qi 59802797 qb AY902775.1 	Hepatitis B virus isolate MTB162...	1296	0.0
qi 6684100 qb AF209400.1 AF209400	Hepatitis B virus isolate...	1296	0.0
qi 6979944 qb AF222311.1 AF222311	Hepatitis B virus isolate...	1296	0.0
qi 58189957 qb AY738821.1 	Hepatitis B virus strain 3227-79...	1296	0.0
qi 58189951 qb AY738818.1 	Hepatitis B virus strain 18720-7...	1296	0.0
qi 2653714 qb U91824.1 HBU91824	Hepatitis B virus isolate 1...	1296	0.0
qi 5114079 qb AF090841.1 AF090841	Hepatitis B virus strain ...	1296	0.0
qi 5114074 qb AF090840.1 AF090840	Hepatitis B virus strain ...	1296	0.0
qi 5114069 qb AF090839.1 AF090839	Hepatitis B virus strain ...	1296	0.0
qi 3462847 qb AF083636.1 	Hepatitis B virus from patient 2-...	1296	0.0
qi 47499911 qb AY603455.1 	Hepatitis B virus isolate 36T la...	1289	0.0
qi 47499899 qb AY603452.1 	Hepatitis B virus isolate 31T la...	1289	0.0
qi 41529346 dbj AB116077.1 	Hepatitis B virus DNA, complete...	1289	0.0
qi 38488595 dbj AB126580.1 	Hepatitis B virus DNA, complete...	1289	0.0
qi 38000016 qb AY344098.1 	Hepatitis B virus isolate 1-AIII...	1289	0.0
qi 6684108 qb AF209404.1 AF209404	Hepatitis B virus isolate...	1289	0.0
qi 6684090 qb AF209395.1 AF209395	Hepatitis B virus isolate...	1289	0.0
qi 7108612 qb AF129506.1 AF129506	Hepatitis B virus S antig...	1289	0.0
qi 5019937 qb AF143299.1 AF143299	Hepatitis B virus clone 7...	1289	0.0
qi 58189953 qb AY738819.1 	Hepatitis B virus strain 10552-8...	1289	0.0
qi 2289187 qb U87732.1 HBU87732	Hepatitis B virus O01 middl...	1289	0.0
qi 2289183 qb U87730.1 HBU87730	Hepatitis B virus O04 middl...	1289	0.0
qi 2289181 qb U87729.1 HBU87729	Hepatitis B virus P03 middl...	1289	0.0
qi 32330514 qb AY233280.1 	Hepatitis B virus isolate 2 comp...	1289	0.0
qi 36938795 qb AY311374.1 	Hepatitis B virus isolate BD1011...	1289	0.0
qi 3551314 dbj AB014370.1 	Hepatitis B virus genomic DNA, c...	1289	0.0
qi 18146685 dbj AB064314.1 	Hepatitis B virus DNA, complete...	1289	0.0
qi 32448579 qb AY254517.1 	Hepatitis B virus isolate 14 pol...	1285	0.0
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qi 47499943 qb AY603463.1 	Hepatitis B virus isolate 11T la...	1281	0.0
qi 47499883 qb AY603448.1 	Hepatitis B virus isolate 23T la...	1281	0.0
qi 23194339 qb AF537371.1 	Hepatitis B virus clone 3.4, com...	1281	0.0
qi 15211900 emb AJ309371.1 HEB309371	Hepatitis B virus comp...	1281	0.0
qi 59455 emb X70185.1 HBVXCPS	Hepatitis B Virus X, C, P and...	1281	0.0
qi 1321823 emb Z72478.1 HBVA317	Hepatitis B virus HBcAg, HB...	1281	0.0
qi 12054267 emb AJ297882.1 HEB297882	Hepatitis B virus part...	1281	0.0
qi 12054263 emb AJ297880.1 HEB297880	Hepatitis B virus part...	1281	0.0
qi 12054259 emb AJ297878.1 HEB297878	Hepatitis B virus part...	1281	0.0
qi 38000030 qb AY344106.1 	Hepatitis B virus isolate 9-AIII...	1281	0.0
qi 38000027 qb AY344104.1 	Hepatitis B virus isolate 6-AIII...	1281	0.0
qi 7380930 qb AF132442.1 AF132442	Hepatitis B virus S antig...	1281	0.0
qi 4884901 qb AF134148.1 AF134148	Hepatitis B virus strain ...	1281	0.0
qi 4884873 qb AF134134.1 AF134134	Hepatitis B virus strain ...	1281	0.0
qi 5019968 qb AF143305.1 AF143305	Hepatitis B virus clone R...	1281	0.0
qi 5019963 qb AF143304.1 AF143304	Hepatitis B virus clone H...	1281	0.0
qi 5019943 qb AF143300.1 AF143300	Hepatitis B virus clone 7...	1281	0.0
qi 5019931 qb AF143298.1 AF143298	Hepatitis B virus clone 7...	1281	0.0
qi 58189955 qb AY738820.1 	Hepatitis B virus strain Wie HBs...	1281	0.0
qi 3248974 qb AF065111.1 AF065111	Hepatitis B virus isolate...	1281	0.0
qi 3128452 qb AF061525.1 AF061525	Hepatitis B virus isolate...	1281	0.0
qi 58189949 qb AY738817.1 	Hepatitis B virus strain Len HBs...	1277	0.0
qi 47499887 qb AY603449.1 	Hepatitis B virus isolate 24T la...	1273	0.0
qi 52353925 qb AY707087.1 	Hepatitis B virus isolate HBV-N1...	1273	0.0
qi 60279582 dbj AB205118.1 	Hepatitis B virus DNA, complete...	1273	0.0
qi 12054257 emb AJ297877.1 HEB297877	Hepatitis B virus part...	1273	0.0
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gi 27357184 gb AY168427.1 	Hepatitis B virus isolate ST21 s...	1273	0.0
gi 436272 gb S65868.1 S65868	Pre-S/S...C [duck hepatitis B ...	1273	0.0
gi 7380932 gb AF132443.1 AF132443	Hepatitis B virus S antig...	1273	0.0
gi 4884899 gb AF134147.1 AF134147	Hepatitis B virus strain ...	1273	0.0
gi 4884893 gb AF134144.1 AF134144	Hepatitis B virus strain ...	1273	0.0
gi 6684106 gb AF209403.1 AF209403	Hepatitis B virus isolate...	1273	0.0
gi 5019984 gb AF143308.1 AF143308	Hepatitis B virus clone W...	1273	0.0
gi 5019979 gb AF143307.1 AF143307	Hepatitis B virus clone R...	1273	0.0
gi 58189947 gb AY738816.1 	Hepatitis B virus strain Wil HBs...	1273	0.0
gi 3248978 gb AF065113.1 AF065113	Hepatitis B virus isolate...	1273	0.0
gi 3462851 gb AF083638.1 AF083638	Hepatitis B virus from pa...	1273	0.0
gi 5114064 gb AF090838.1 AF090838	Hepatitis B virus strain ...	1273	0.0
gi 3462849 gb AF083637.1 	Hepatitis B virus from patient 2-...	1273	0.0
gi 3248984 gb AF065116.1 AF065116	Hepatitis B virus isolate...	1271	0.0

Alignments

☒ [>gi|59418|emb|X02763.1|HBVADW2](#) Hepatitis b virus genome (serotype adw2)
Length = 3221

Score = 1312 bits (662), Expect = 0.0
Identities = 676/678 (99%), Gaps = 2/678 (0%)
Strand = Plus / Plus

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Length = 3221

Score = 1312 bits (662), Expect = 0.0
Identities = 676/678 (99%), Gaps = 2/678 (0%)
Strand = Plus / Plus

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 >gi|14285166|gb|AF305422.1|AF305422 Synthetic construct Hepatitis B virus 1.28-mer over
Length = 4084

Score = 1312 bits (662), Expect = 0.0
Identities = 676/678 (99%), Gaps = 2/678 (0%)
Strand = Plus / Plus

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Query: 60 ttgttgacaagaatcctcacaataccgcagagtctagactcgtgggtggacttctctcaat 119

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 Strand = Plus / Plus

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Length = 1203

Score = 1304 bits (658), Expect = 0.0
Identities = 675/678 (99%), Gaps = 2/678 (0%)
Strand = Plus / Plus

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
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Identities = 675/678 (99%), Gaps = 2/678 (0%)
Strand = Plus / Plus

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
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 Identities = 675/678 (99%), Gaps = 2/678 (0%)
 Strand = Plus / Plus

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
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Query: 599 tgggggccaagtctgtacagcatcgtgagtcctttataaccgctgttaccaattttcttt 658
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Sbjct: 755 tgggggccaagtctgtacagcatcgtgagtcctttataaccgctgttaccaattttcttt 814

Query: 659 tgtctctgggtatacatt 676
|||||
Sbjct: 815 tgtctctgggtatacatt 832

```

 >gi|41529358|dbj|AB116080.1| Hepatitis B virus DNA, complete genome, isolate:HBV-TR2
Length = 3221

Score = 1304 bits (658), Expect = 0.0
Identities = 675/678 (99%), Gaps = 2/678 (0%)
Strand = Plus / Plus

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Query: 1 atggagaacatcacatcaggattc-taggaacctgctcgtgttacaggcgggggttttc 59
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Sbjct: 155 atggagaacatcacatcaggattcctaggacctgctcgtgttacaggcgggggttttc 214

Query: 60 ttgttgacaagaatcctcacaataccgcagagtctagactcgtgggtggacttctctcaat 119
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Sbjct: 215 ttgttgacaagaatcctcacaataccgcagagtctagactcgtgggtggacttctctcaat 274

Query: 120 tttctagggggatctcccgtgtgtcttggccaaaattcgcagtccccaacctccaatcac 179
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Sbjct: 275 tttctagggggatcaccctgtgtgtcttggccaaaattcgcagtccccaacctccaatcac 334

Query: 180 tcaccaac-tcctgtcctccaatttgctcctgggttatcgctggatgtgtctgcggcggtttt 238
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Sbjct: 335 tcaccaacctcctgtcctccaatttgctcctgggttatcgctggatgtgtctgcggcggtttt 394

Query: 239 atcatattcctcttcatcctgctgctatgcctcatcttcttattgggttcttctggattat 298
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Sbjct: 395 atcatattcctcttcatcctgctgctatgcctcatcttcttattgggttcttctggattat 454

Query: 299 caaggatatgttgcccgtttgtcctctaattccaggatcaacaacaaccagtacgggacca 358

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Query: 359 tgcaaaacctgcacgactcctgctcaaggcaactctatgtttccctcatgttgctgtaca 418

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Sbjct: 515 tgcaaaacctgcacgactcctgctcaaggcaactctatgtttccctcatgttgctgtaca 574

Query: 419 aaacctacggatggaaattgcacctgtattcccatcccatcgtcctgggctttcgcaaaa 478

|||||
Sbjct: 575 aaacctacggatggaaattgcacctgtattcccatcccatcgtcctgggctttcgcaaaa 634

Query: 479 tacctatgggagtgggcctcagtcctgtttcttggctcagtttactagtgccatttgtt 538

|||||
Sbjct: 635 tacctatgggagtgggcctcagtcctgtttcttggctcagtttactagtgccatttgtt 694

Query: 539 cagtgggttcgtagggctttcccccactgtttggctttcagctatatggatgatgtggtat 598


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Sbjct: 695 cagtgggttcgtagggctttcccccactgtttggctttcagctatatggatgatgtggtat 754

Query: 599 tggggggccaagtctgtacagcatcgtgagtcctttataaccgctgttaccaattttcttt 658

|||||
Sbjct: 755 tggggggccaagtctgtacagcatcgtgagtcctttataaccgctgttaccaattttcttt 814

Query: 659 tgtctctgggtatacatt 676

|||||
Sbjct: 815 tgtctctgggtatacatt 832

 >gi|41529354|dbj|AB116079.1| Hepatitis B virus DNA, complete genome, isolate:HBV-TR1
Length = 3221

Score = 1304 bits (658), Expect = 0.0
Identities = 675/678 (99%), Gaps = 2/678 (0%)
Strand = Plus / Plus

Query: 1 atggagaacatcacatcaggattc-taggaacctgctcgtgttacaggcggggttttc 59

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Query: 60 ttgttgacaagaatcctcacaataaccgcagagtctagactcgtgggtggacttctctcaat 119

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Sbjct: 215 ttgttgacaagaatcctcacaataaccgcagagtctagactcgtgggtggacttctctcaat 274

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Query: 1 atggagaacatcacatcaggattc-taggaacctgctcgtgttacaggcgggggtttttc 59
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Query: 60 ttgttgacaagaatcctcacaataccgcagagtctagactcgtggtggacttctctcaat 119
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 Sbjct: 455 caaggatatgttgccggttgcctctaattccaggatcaacaacaaccagtacgggacca 514

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Query: 419 aaacctacggatggaaattgcacctgtattcccatcccatcgtcctgggctttcgcaaaa 478
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Query: 659 tgtctctgggtatacatt 676
 |||||
 Sbjct: 815 tgtctctgggtatacatt 832

 >gi|62006064|dbj|AP007263.1| Hepatitis B virus gene for HBsAg, X protein, HBeAg, core
 polymerase, LHBs
 Length = 3221

Score = 1304 bits (658), Expect = 0.0
Identities = 675/678 (99%), Gaps = 2/678 (0%)
Strand = Plus / Plus

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Sbjct: 275 tttctaggggggatcaccgggtgtgtcttggccaaaattcgagtcaccaacccaatcac 334

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Sbjct: 575 aaacctacggatggaaattgcacctgtattcccatcccatcgctcctgggctttcgcaaaa 634

Query: 479  tacctatgggagtgggcctcagtcggtttctcttggctcagtttactagtgccatttggt 538
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Query: 539  cagtgggttcgtagggctttccccactggttggtttcagctatatggatgatgtgggtat 598
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Sbjct: 695 cagtgggttcgtagggctttccccactggttggtttcagctatatggatgatgtgggtat 754

Query: 599  tggggggccaagtctgtacagcatcgtgagtcctttataaccgctgttaccattttcttt 658
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Query: 659 tgtctctgggtatacatt 676
|||||||
Sbjct: 815 tgtctctgggtatacatt 832

>gi|3892577|emb|AJ012207.1|HBV012207 Hepatitis B virus ssAg, c, pol and x genes
Length = 3221

Score = 1304 bits (658), Expect = 0.0
Identities = 675/678 (99%), Gaps = 2/678 (0%)
Strand = Plus / Plus

Query: 1 atggagaacatcacatcaggattc-taggaacctgctcgtgttacaggcgggggtttttc 59
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Sbjct: 155 atggagaacatcacatcaggattcctaggacctgctcgtgttacaggcgggggtttttc 214

Query: 60 ttgttgacaagaatcctcacaataccgcagagtctagactcgtgggtggacttctctcaat 119
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Query: 120 tttctaggggatctcccggtgtgtcttggccaaaattcgagtcaccaacccaatcac 179
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Query: 180 tcaccaac-tcctgtcctccaatttgcctggttatcgctggatgtgtctgcggcgtttt 238
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Query: 239 atcatattcctcttcatcctgctgctatgcctcatcttcttattgggttcttctggattat 298
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Sbjct: 395 atcatattcctcttcatcctgctgctatgcctcatcttcttattgggttcttctggattat 454

Query: 299 caagggtatgttgcccggttgcctctaattccaggatcaacaacaaccagtacgggacca 358
|||||||
Sbjct: 455 caagggtatgttgcccggttgcctctaattccaggatcaacaacaaccagtacgggacca 514

Query: 359 tgcaaaacctgcacgactcctgctcaaggcaactctatgtttccctcatgttgctgtaca 418
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Query: 419 aaacctacggatggaaattgcacctgtattcccatcccatcgctcctgggctttcgcaaaa 478
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Sbjct: 635 tacctatgggagtgggcctcagtcggtttctcttggctcagtttactagtgccatttggt 694


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Sbjct: 755 tgggggccaagtctgtacagcatcgtgagtcctttataaccgctgttaccaattttcttt 814

Query: 659 tgtctctgggtatacatt 676
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Sbjct: 815 tgtctctgggtatacatt 832

```

 >gi|15419852|gb|AF297624.1|AF297624 Hepatitis B virus isolate 80, complete genome
Length = 3200

Score = 1304 bits (658), Expect = 0.0
Identities = 675/678 (99%), Gaps = 2/678 (0%)
Strand = Plus / Plus

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Sbjct: 155 atggagaacatcacatcaggattcctaggacccctgctcgtgttacaggcgggggttttc 214

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Sbjct: 215 ttgttgacaagaatcctcacaataccgcagagtctagactcgtgggtggacttctctcaat 274

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Sbjct: 575 aaacctacgatggaaattgcacctgtattcccatcccatcgtcctgggctttcgcaaaa 634

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Query: 659 tgtctctgggtatacatt 676
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Sbjct: 815 tgtctctgggtatacatt 832

```

>gi|58189959|gb|AY738822.1| Hepatitis B virus strain Rio HBsAg (S) gene, complete cds
Length = 681

Score = 1304 bits (658), Expect = 0.0
Identities = 675/678 (99%), Gaps = 2/678 (0%)
Strand = Plus / Plus

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Sbjct: 301 caaggtatgttgcccgtttgcctctaattccaggatcaacaacaaccagtacgggacca 360

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Sbjct: 481 tacctatgggagtgggcctcagtcctgtttctcttggtcagtttactagtgccatttgtt 540

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Sbjct: 601 tgggggccaagtctgtacagcatcgtgagtcctttataaccgctgttaccaattttcttt 660

Query: 659 tgtctctgggtatacatt 676

|||||
Sbjct: 661 tgtctctgggtatacatt 678

>gi|2289173|gb|U87725.1|HBU87725 Hepatitis B virus A24 middle S protein (preS2/S) gene
Length = 846

Score = 1304 bits (658), Expect = 0.0
Identities = 675/678 (99%), Gaps = 2/678 (0%)
Strand = Plus / Plus

Query: 1 atggagaacatcacatcaggattc-tagggaccctgctcgtgttacaggcgggggttttc 59

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Sbjct: 226 ttgttgacaagaatcctcacaataccgcagagtctagactcgtgggtggacttctctcaat 285

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|||||
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

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Query: 659 tgtctctgggtatacatt 676
|||||
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 >gi|292401|gb|L13994.1|HUMPRECX  Hepatitis B virus preS and preC mRNA, complete cds
Length = 3221

Score = 1304 bits (658), Expect = 0.0
Identities = 675/678 (99%), Gaps = 2/678 (0%)
Strand = Plus / Plus

Query: 1 atggagaacatcacatcaggattc-taggaacctgctcgtgttacaggcgggggttttc 59
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Sbjct: 277 tttctagggggatcacccggtgtgtcttggccaaaattcgagtcaccaacctccaatcac 336

Query: 180 tcaccaac-tcctgtcctccaatttgccttggttatcgctggatgtgtctgcggcggtttt 238
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Sbjct: 337 tcaccaacctcctgtcctccaatttgccttggttatcgctggatgtgtctgcggcggtttt 396

Query: 239 atcatattcctcttcatcctgctgctatgcctcatcttcttattgggttcttctggattat 298
|||||
Sbjct: 397 atcatattcctcttcatcctgctgctatgcctcatcttcttattgggttcttctggattat 456

Query: 299 caaggatatgttgcccggttgcctctaattccaggatcaacaacaaccagtacgggacca 358
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Sbjct: 457 caaggatatgttgcccggttgcctctaattccaggatcaacaacaaccagtacgggacca 516

Query: 359 tgcaaaacctgcacgactcctgctcaaggcaactctatgtttccctcatgttgctgtaca 418
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Query: 419 aaacctacggatggaaattgcacctgtattcccatcccatcgctcctgggctttcgcaaaa 478
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Sbjct: 577 aaacctacggatggaaattgcacctgtattcccatcccatcgctcctgggctttcgcaaaa 636

Query: 479 tacctatgggagtgggcctcagtcggtttctcttggctcagtttactagtgccatttggt 538
|||||
Sbjct: 637 tacctatgggagtgggcctcagtcggtttctcttggctcagtttactagtgccatttggt 696

Query: 539 cagtgggttcgtagggctttccccactggttggtttcagctatatggatgatgtgggat 598
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Sbjct: 757 tggggggccaagtctgtacagcatcgtgagtcacctttataaccgctgttaccaattttcttt 816

Query: 659 tgtctctgggtatacatt 676
|||||
Sbjct: 817 tgtctctgggtatacatt 834

>gi|2653706|gb|U91820.1|HBU91820 Hepatitis B virus isolate 2231NIC Nicaragua, small S
complete cds
Length = 681

Score = 1304 bits (658), Expect = 0.0
Identities = 675/678 (99%), Gaps = 2/678 (0%)
Strand = Plus / Plus

Query: 1 atggagaacatcacatcaggattc-taggaccctgctcgtgttacaggcgggggttttc 59
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 Sbjct: 1 atggagaacatcacatcaggattcctaggaccctgctcgtgttacaggcgggggttttc 60

Query: 60 ttgttgacaagaatcctcacaataccgcagagtctagactcgtgggtggacttctctcaat 119
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Query: 120 tttctaggggatctcccgtgtgtcttggccaaaattcgagtcaccaacctccaatcac 179
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